

ABSTRACT OF THE DISCLOSURE

The fast switching multifunction antenna of the present invention is a variable length antenna that may be switched to provide the equivalent function of a broadband antenna. The variable length antenna quasi-continuously transmits or receives signals at a plurality of frequencies by changing the effective length of the antenna using a variety of switching mechanisms. The present invention may comprise a plurality of antenna segments, a plurality of selectively actuatable switches for interconnecting the antenna segments, and a switching mechanism operably coupled to the plurality of selectively actuatable switches for switching them at a switching rate that is greater than twice the highest frequency to be transmitted or received. The switching rate will be fast enough to allow the antenna to sample the highest frequency and all of the required lower frequencies within the desired frequency range without the loss of information at any frequency. However, the switching rate is slow enough to allow sampling of the frequency at each antenna length before the next antenna length is activated.